Art. XII. *On Diseases of the Fœtus: a contribution towards a better acquaintance with Intra-uterine Pathology.* By Wm. C. Roberts, M. D., of New York.

The observation made by Morgagni nearly two hundred years ago, that "a wide and almost unbeaten track lies open for the investigation of the diseases of new born infants, by accurate dissections after death, as well as by attentive observation during life," is even now applicable; and we find Dr. Stokes in his clinical lectures on the Theory and Practice of Physic, delivered about three years ago, thus confirming it. "There is one fact in pathology, which seems not to be generally acted on; that there is a class of diseases which are intra-uterine, and with which a child may be born. There are a great many cases of this kind upon record, but still, I must confess there is great scope for investigation, and that our knowledge on this subject is imperfect. I believe that any one who has the opportunity of dissecting a great many stillborn children, or of those who die immediately after birth, would, by examining the state of the different cavities and publishing the results of his examinations, earn for himself very great reputation."

Morgagni (*De Sedibus*) has treated of unnatural formations and diseases in the fœtus, and among the cases are many of great interest. Andral, in his Pathological Anatomy, has recorded, in a general way, many congenital malformations and pathological states. The work of Billard is the richest in accurate and valuable dissections of the stillborn, among whom he has met with many of the diseases observed in after life. Two years after the publication of the first edition of this work, Andry published in the *Journal des Progrès*, Feb., 1830, the only recent ex-professo article on this subject, with which I am acquainted. Ten years have now elapsed since its appearance, and although it contains much that is interesting, and a concise account of the pathological history of the more important diseases, it must, on the whole, be considered as very imperfect. I am surprised that no allusion to the name or labours of Billard appears in it, though parts of it seem copied from his work. Some parts of Cruveilhier's great work on pathological anatomy, are devoted to the diseases of the fœtus. Two very elaborate contributions to intra-uterine pathology, have appeared from the pen of Dr. J. Y. Simpson, of Edinburgh, the one on peritonitis, and the other on some of the presumed consequences of intra-uterine inflammatory action. Such are some of the authorities on this subject, and the facts which they contain have been reassembled by the author in the following paper, with such other examples as his research has supplied. Perfectly conscious of its imperfections, he submits it to the profession as the nucleus of a future more comprehensive summary from some abler pen, on a subject which is beginning more particularly to engage the attention of medical men.

In the detail of observations which I shall give, I purpose to commence with those of the skin and its appendages, the hair and nails; next to consider those of parts externally situated, as the ears, eyes, nose, lips, &c.; then passing inwardly, those of the cranial, thoracic and abdominal cavities, the genitals, internal and external, the spinal marrow and canal. And first,

OF CONGENITAL DISEASES OF THE SKIN.

Petechiæ, Ichthyosis, Pemphigus, some of the Syphilidæ, Variola, Vaccinia, Erythema, Sclerema, Elephantiasis, Anasarca, Erysipelas, Icterus, Absence of the Skin, Congenital Development of the Papillæ, Leucopathia, Warts, Nævi, are among these.

1. *Petechiæ.*—Andral, in his *Anat. Path.*, vol. ii, p. 417, refers to a case related by M. Stoltz in the *Archives Gén. de Méd.*, vol. xv, of ecchymosis in a pregnant woman, similar ones being found in the lungs, pericardium, heart, and vessels of the fœtus. In Cruveilhier, *Anat. Path.*, liv. 15, it is stated, that in an anasarcous fœtus of 7 months, spots of purpura covered the whole surface of the body and mucous membrane of the tongue and intestines, in the muscles, pericranium and mucous membrane of the pharynx. Several of his cases are of syphilitic purpura. Andry remarks that a knowledge of the fact that children are born with ecchymoses, which frequently result from injuries received by the fœtus in delivery, is useful in a medico-legal point of view, as they might be attributed to criminal attempts to destroy the fœtus.

2. *Ichthyosis* is very frequently, but not always congenital, and many facts are on record to prove that it is also hereditary. Thus Martin states that it was transmitted from a mother to her daughter. The two Brayers, who laboured under general ichthyosis, were the sons of a diseased father. Mr. Martin, (*Philos. Trans.*, vol. xlix, p. 21,) gives an account of a man named Lambert, who had six children similarly affected—the celebrated "Porcupine family." There is in the Anatomical Museum at Berlin, a monstrous fœtus, whose entire body is covered with a layer of epidermis several lines thick and traversed by numerous fissures, giving it the appearance of a cuirass. (Steinhausen, *De sing. epiderm. deformatione.* Berlin. *Gaz. Méd.* 1831, vol. ii, p. 10.) The *Am. Journ. of Med. Sci.* for Nov. 1831, contains an analysis of Schmidt's Descriptio Ichthyosis Corneæ Congenitæ in Virgine Observatæ, to which the reader is referred as perhaps the most remarkable on record. St. Vander Wiel (*Cent. Post. Obs.* 35) observed a fœtus whose whole surface, except the head, was covered by hard scabrous scales, like the skin of a phoca, which exhaled a bad smell, fell off and were renewed. (Andry.)

3. *Pemphigus.*—Lobstein (*Journ. Comp. du Dict. des Sc. Méd.* vol. vi,) has given an account of a case of congenital pemphigus with ramollissement of the placenta. Other cases may be found in an article by Hintz, (*Bull. des Sci. Med.* de Férussac, xi. 47,) Goeckel and Sedel (*Eph. Cur. Nat.*) Desormeaux (Art. *œuf humain, Dict. de Méd.* 1st edition,) cites from Oehler an interesting case of what the latter calls Pemphigus, but which Desormeaux considers to be Varicella. (Andry.) In the *Rec. per. d'obs de Ch. Med. et Pharm.* 1756, vol. i. p. 167 is the case of a fœtus with hair lip, deficiency of nose and palate, the nates inflamed and painful, covered with pustules containing a puriform fluid, large red patches over the body, the heels inflamed and several small *scrofulous* tumours on the ankles.

4. *Syphilis.*—The experience of every day proves to a demonstration, that the fœtus in utero is frequently affected with syphilis. Cutaneous eruptions, although scabby pustules, ulcers and tubercles have been seen by Schenck, Rosen and Desir, are less frequent than a state of cachexy. The 7, 9, 10, 11, and 12 cases in Cruveilhier's Liv. 15, are cases of syphilitic

phylctenæ and pustules. See a valuable paper, on the venereal disease in the fœtus in utero, by Mr. Hey, of Leeds, (*Med. Ch. Trans.* vol. vii.) Bertin (*Treat. on the Venereal Disease in newborn children, pregnant women and nurses.* Par. 1810.) Andry denies the possibility of an infection of the fœtus through the fluids of the mother, thinks external contact the only admissible explanation of the occurrence, though prima facie impossible, and considers the cachexy of the child owing to the excesses of or abuse of mercury by the mother.

5. *Variola.*—Of the many recorded instances of this notorious fact, it may be mentioned that Mauriceau was born with 5 or 6 pustules. Rayer relates a case, which he saw with Messrs. Littre and Young, where a stillborn fœtus had on its body a large number. Marc (*Dict. des Sci. Med.* vol. xvi, p. 71,) has related three instances. Jenner, (*Med. Ch. Trans.* vol. i, p. 269.) Deneux, a case of variola in a newborn child, the mother having been vaccinated. (*J. Hebdom.* vol. viii, 2d Series, p. 56.) Husson (*Rev. Méd.* vol. xi, p. 151.) Noblet, (*Arch. Gén. de Méd.* vol. xii, p. 126.) The curious reader may also consult Dr. Davis's erudite work on the *Princ. and Pract. of Obstetric Medicine*, 1834, p. 891, for references to cases by Smellie, Mauriceau, Bland, (the pustules at maturity white and full of matter,) J. Hunter, Baker and Roberts. Also a paper in the *Med. Comm.* 1794, by Dr. Geo. Pearson, on the effects of variolous infection in pregnant women, occupying about forty pages, containing several good cases and a great deal of interesting matter. Dr. Davis also relates a case of twin pregnancy, in which one fœtus was affected with smallpox and stillborn, the other born healthy and alive; and one from Mortimer, where the fœtus became infected in utero, in consequence of its mother having seen a woman who was labouring under the disease; and a similar instance from Watson, *Phil. Trans.*, vol. xlvi, p. 235. A case of this kind, preserved in the anatomical cabinet of Guy's Hospital, is related at length by Billard.

Scarlatina has never, I believe, been known to affect the fœtus in utero. Vogel and others assert that *rubeola* has been seen at birth; and Rosen (*Dis. of Children*, ch. xiv, p. 255) has given some interesting cases of congenital measles. Billard states that he had seen a child born with an *erythema* in the form of little irregular patches, disseminated on various parts of the body, the aspect of which simulated measles.

I also refer the reader to an account contained in the *Med. Ch. Rev.* Jan. 1830, copied from the *Journ. des Prog.*, vol. xv, and into it from a Swedish journal, of the case, *seemingly authentic*, of a child who, soon after birth, was observed to have upon its arms regular "*vaccine tubercles*" in the same number and at the same points as those which had previously appeared on the mother, on whom they reached maturity on the day of her delivery. The tubercles went on to maturation and left cicatrices after them agreeing in all respects with those of the mother.

As I have now treated of some of the diseases communicated from the mother to the fœtus in utero, I may here, with propriety, introduce the statement made by Dr. Elliotson on the 141st page of his work on the Practice of Physic, on the authority of Dr. Russell, of Aleppo. "A woman who had a tertian ague, felt the child within her shake every other day, when she was disposed to be quiet. Peruvian bark cured both, but the child had one paroxysm less than the mother. A similar case, says

Dr. E., I saw at a dispensary. The woman came shaking, and the child within her shook like herself, but at a different time." In the *Am. Journ. Med. Sci.* for Feb. 1828, is the case by Dr. Warren, of a fœtus poisoned by opium taken by the mother.

6. *Elephantiasis.*—Among 23,000 children born at the Maternité in Paris, M. Chaussier twice saw this disease in the lower limbs. It was a tense, elastic, compact, indolent tumefaction, without redness, or any sensible alteration of the skin, and not œdematous. The parts were divided by two deep, narrow, circular furrows, looking as if made by a string. The external cutis was healthy, but the vesicles of the adipose tissue were filled with white compact fat, and their areolæ with a sero-gelatinous fluid, easily expressible on pressure. Alard, in his work on this disease, mentions similar facts in the legs and feet of the fœtus.

7. *Sclerema.* (Skin bound œdema, or hardening of the cellular tissue.) This disease of the new born child, which may either be congenital, or occur soon after birth, is, I suspect, more common in France than in England, or in this country. At the time when it attracted the attention of Andrii, six hundred children died of it annually at the Hospice des Enfans Trouvés, at Paris, and recently M. Billard, in a most elaborate article on this subject in his work on children, speaks of the dissection of seventy-seven children labouring under it, and says that two hundred and forty were admitted with it, in one year, into the Foundling Hospital. There are two varieties, the œdematosa and the concreta. Both arise from a similar cause, an accumulation of highly coagulable serum in the subcutaneous adipose and intermuscular cellular tissue, and occasionally, that of other parts, as of the lungs. The phenomena which they offer differ, but I refer to the authorities for a detail of the peculiarities. The article in the *Dict. de Méd. et de Chir. Prat.* is a very good one, and in that entitled "Induration of the Cellular Tissue," in Copland's learned Dictionary, is a list of references to authors and an excellent account of the disease. I shall only further mention Andrii, (*Mem. de la Soc. Roy. de Méd.* 1784,) a very instructive chapter in Underwood's Treatise on the Diseases of Children, on what he calls "skinbound," which he was among the first to notice in England—Denman, Burns and Matthew Baillie. In the first vol. of the Works of the last by Wardrop, 1825, p. 75, he describes concisely, but accurately, the concrete variety of the disease, in what he calls the "case of a remarkable hardness of the skin of an infant:" this hardness, which was not universal, being like that of leather used in making strong shoes; the fat was gathered into little lobules and firmer than common, and the superficial muscles had in some degree partaken of the diseased change. No internal disease was noticed. Dr. Stratford, in the *Boston Med. and Surg. Journ.* for 1829, has related a striking instance of the œdematous form; the child lived for three weeks, during which time the serum became absorbed and the skin hung in folds upon its body.

8. *Anasarca* is an affection closely allied to this of which I have just spoken. It is always symptomatic. In the first case of acute peritonitis recorded by Dr. Simpson (*Ed. Med. and Surg. Journ.* Oct. 1838) it is stated that there was a considerable accumulation of serous and sero-sanguinolent effusion in the cellular tissue in various parts of the body. In case 6 the face was swelled and deformed with œdema, and the upper extremities, particularly the hands, œdematous. In case 11, born living,

the hands, and not the lower limbs, were anasarcous. In case 14, slight serous infiltration, more particularly in the lower extremities. It probably accompanies most cases of congenital abdominal dropsy which are met with, though of this I have not satisfied myself by reading. Otto says that in some rare cases, a turbid serum is effused between the bones and their investing periosteum, in dropsical newborn children. *Compend. of Path. Anat.*, translated by South, p. 178.

9. *Erysipelas*, says Dr. Good, in his Study of Medicine, vol. ii, p. 260, "sometimes attacks infants from a very early period after birth, and what is more singular, they have in a few instances been born with it." I know of no cases in support of this assertion.

10. *Cirrhonosis. Icterus.*—The fœtus is often born with the skin of a yellow colour, but this jaundice is not proved to depend upon the presence of bile; the analysis of M. Chevreul, of the blood of icteric and scleromatous fœtuses, renders it probable, but his views are ably controverted by Billard. "It has long been remarked," says Andral, *Anat. Path.*, West's translation, vol. i, p. 583, "that yellow spots sometimes appear either on the skin, or other tissues, and the learned Professor Lobstein, of Strasburg, (*Rep. d'Anat. Path.*, vol. i,) in several immature embryos, found a very marked golden tinge in different parts, chiefly the serous membranes of the cranium, thorax and abdomen, spinal cord, and two cords of the great sympathetic." This affection appears to Andral to differ from Icterus Neonatorum only in situation. Ollivier (*On the Spinal Marrow*, &c., vol. i., p. 209, 2d ed.) treats fully on it. "An observation by Kerkringius, in the *Sepulch.* of Bonetus," says Morgagni, (vol. ii, p. 176, Cooke's translation,) "introduces to our notice the bones of an icteric fœtus exceedingly yellow, and this circumstance would not excite our surprise, because instead of blood, he found a yellow humour like bile." Desormeaux saw a small newborn child whose skin was of a yellowish green colour. The liquor amnii was also of a deep yellow, and stained the linen on which it was shed. The child, though born weak and thin, soon recovered its health and colour. (Andry.) Lobstein has described another sort of jaundice, consisting in an infiltration of a yellow humour in the cellular tissue of the skin, muscles and organs of the body, consequent on *complete disorganization of the cerebellum.* The child was small; its whole body very yellow: it had excoriations on the face, and the epidermis of the hands and feet was removed. The intestinal tube was moderately filled with a yellowish albuminous fluid, and contained no meconium. The liver was of its natural size, and the gall bladder contained a very thin green fluid. The spleen was very large, three inches long and one and a half broad. The bladder was half full of a yellow fluid like that in the intestines, and its inner membrane was spotted red, as if with petechiæ. The umbilical arteries and vein were contracted, and their walls thicker than usual. The lymphatic vessels of the chest were very apparent, and some appeared distended with a yellow fluid; the conglobate glands were equally yellow and semitransparent. The tunics of the innominata and right carotid were spotted in the same manner as the bladder, which spots could neither be washed, nor scratched off. Between the pia mater and cortical substance of the brain, yellow lymph was effused, spreading over both hemispheres; extravasation of blood had occurred in two places in the brain. No blood existed in the sinuses or vessels, and no fluid in the ventricles. The outer

layer of the cerebellum was of a deep red, forming a cortex a line thick, which having been incised, showed disorganization of the substance of the cerebellum, which was changed into a thick albuminous yellow matter, like the yolk and white of eggs beaten together. The medulla and nerves were natural. Between the dura mater and processes of the vertebræ, was spread a yellow lymph like that upon the brain. The muscles were generally pale and yellowish. Their interstices, and the subcutaneous cellular tissue, chiefly that of the joints, were bathed in the same yellow layer.

Nothing analogous to this change in the cerebellum has ever been met with in the adult; it was neither encephaloid nor medullary sarcoma. Hence, says the learned professor, the necessity of studying the changes of organization presented at even the tenderest age, and here a proof is afforded that an examination of the comparative pathology of the fœtus and adult, will be more and more fruitful in interesting results. (Andry.) Billard had seen four cases analogous to this discolouration spoken of by Lobstein, but without the disorganization of the cerebellum.

11. *Absence of the Skin* necessarily occurs when the thoracic or abdominal parietes are deficient; and Rayer states that a primitive deficiency of the epidermis has been seen in new born children. In Ploucquet's *Bib. Med.* I find the following reference: "Garmann. Ep. 308. Fœtus epidermide carente." Otto, *Path. Anat.*, p. 103, states, that although the formation of the skin may be imperfect, it can never be entirely wanting.

Under this head I may, perhaps with propriety ,state, that Dr. Joerg of Leipzig has seen a general desquamation in the new born child. (Andry.) The child was full grown and healthy in appearance. Naegele relates the following case, which may be found in the 7th vol. of the *Journ. des Progrès,* &c.: "The liquor amnii, when discharged, was putrid, thick, fetid, and of a blackish green. The skin of the child was cadaverous and his flesh soft. When placed in a warm bath the epidermis peeled off on the slightest touch, so that it might easily have been all removed: on the face and hands it was wholly gone, and the skin below was very red, and as it were furrowed: gradually it all came off, was regenerated, and the child did well." (Andry.)

12. *Congenital Development of the Papillæ.*—I shall cite further on, says Rayer, *Mal. de la Peau*, vol. iii, p. 613, a case of congenital development of the papillæ, which became as fringes, were red and covered with an epidermis, as it were cartilaginous. The same author states, p. 681, that a man died in the Hosp. St. Antoine, who had in his body a great many congenital tumours, varying in size from a pea to a hen's egg: the section was smooth, white and cellular, not fatty; the smaller ones containing no vessels. He calls it "hypertrophy of the cellular tissue." Mr. Mayo, in his Outlines of Human Pathology, refers to the case of a person whose arm is modelled in the museum of King's College, London. It is thickened on the back part of the limb, of a brown colour, and hangs in a thick pendulous flap, several inches long. The hypertrophia was congenital. In the catalogue of Soemmering's famous museum at Frankfort on the Maine, p. 75, occurs the following: "Monstra. 3. Fœtus neonatus feminino, cretinismo laborans Salisburgensis, pororum sebaceorum insignis magnitudo."

13. *Leucopathia* is a discolouration, congenital or accidental, of the skin, hair and eyes, owing to the absence of colouring matter in these

organs. General congenital leucopathia constitutes albinism, in which the skin is of a dull white, the hairs white as silk or cotton, the iris of a pale and the pupil of a deep red. Piebald negroes are instances of partial congenital leucopathia.

The following very curious case of an opposite discolouration, which might be called iodopathia, is related by M. Chamseru, in the *Hist. de la Soc. Roy. de Méd.*, vol. iv, p. 264: "A child was born with a violet coloured skin, which in certain parts grew darker gradually, and became nearly black. The whites of the eyes, and the irides, became of a violet hue. It was living at 8 years old. (South, in Otto, p. 107.)

14. *Warts*, which are eminences produced by the hypertrophy of the papillæ, and sometimes of all the layers of the skin, have been known to be congenital. A very remarkable case in a full grown fœtus, has been described by M. Ollivier D'Angers, in the 35th vol. of the *Arch. Gén. de Méd*, p. 74. On the anterior part of the chest and abdomen, existed an infinite number of warts of a grayish white, several as large as a lentil, and all more or less pediculated. The verrucous vegetation also existed on the shoulders, arms, elbows, thighs, and nates. All the organs within the fœtus were healthy. Dr. A. T. Thompson, in his Atlas of Delineations of Cutaneous Diseases, p. 100, relates two cases of warty nævus. The skin of the right side of the chest, from the nipple to the clavicle, in a healthy young man, and that of the axilla of the same side, of the internal surface of the arm and fore arm, for a width of nearly two inches, presented congenital papillary eminences, which had grown rapidly within a few months. They were elastic, reddish, fungoid, narrow based, and so crowded together as almost to stand upright, about four lines long, and three lines wide, bathed in a fetid exudation. The epidermis was dense, and like cartilage when cut. They were removed by caustic. The other case occurred in the lip and chin of a child, and was excised. "I have seen a boy," says Otto, p. 113, note 5, "who had a mother's mark affecting the neck, the left side of the breast, and the greater part of the back, covered with black hair, and with horny warts and points." Lobstein describes a fœtus as existing in the Strasburg Museum, entirely covered with warts. "I saw," says Billard, "a new-born child in the Foundling Hospital, which had on each cheek, a cutaneous excrescence half an inch long, and as big as a crow quill. Two others, also, of the same size, but much less prominent, existed in front of each ear, and the concha of the left scarcely existed at all, and its aperture was completely occluded.

15. *Nævi.*—There remains to be noticed only the congenital blemishes, or marks, with which the skin of the newborn is affected. These, which are very various and numerous, may be ranged under three groups. The first comprises congenital anomalies of the coloring matter; the second, vascular productions and hypertrophies; the third, the congenital cutaneous and subcutaneous hypertrophies, of which examples have just been given.

Under the first head come *Spili*, yellow, or coffee-coloured spots, (*nævus chloasma,*) brown, or black spots, (nævus niger), bronzed hues, or as in the case of Gdart., the "living angel;" bluish or grayish black spots. Under the second head, are ranged the hypertrophies of the vascular elements of the skin, comprising angiëctasia capillaris; and lastly, erectile and varicose tumours, the diseases commonly called aneurism by anastomosis.

Nævus araneus, nævus flammeus, the claret coloured spot so commonly seen upon the face in our streets, called by Alibert "ecchymoma congenitale." Instances of such common occurrence, it is unnecessary to quote. Rayer, who describes them all, has given their bibliography, eulogizing particularly the papers by M. Tarral, in the *Arch. Gén. de Méd.*, Sept. and Oct. 1834, as containing most of the cases published up to that period. I may not however, omit to mention the paper by my zealous and talented friend, Dr. John Watson, of this city, contained in the *Am. Journ. of Med. Sci.*, May, 1839, on telangiectasis, in which many cases are given and much research and pathological acumen exhibited.

CONGENITAL AFFECTIONS OF THE HAIR AND NAILS.—These are absence, superabundance, whiteness or particolour of the former or absence of the latter.

Congenital absence of the hair is rare, and seldom lasts more than a few years. Beavais, however, whose case is related by Rayer, had at 32 years of age, neither eyebrows, nor eyelashes, no hair on the head and very little on the pubes or in the axilla. He shaved only once in three weeks. Children, says Otto, p. 120, note 2, are, according to Haller, often born covered with hair, which often grow from the surface of nævi. Children have been born with very white tufts of hair. I have seen, says Underwood (*On Children*, vol. i. p. 96) two instances, where one half being red, the other half was in one instance black, in the other white.

Nails.—Blech asserts that there is in the museum at Berlin, a fœtus without nails, an extremely rare vice of conformation. Otto, p. 118, note 9, speaks of a common nail for several fingers.

Of the Ear.—The existence of congenital deafness is well known, and the reader may consult the *Med. Ch. Rev.* Jan. 1836, for the dissections in three cases, by Messrs. Cock and Thurnam, in which it arose from malformation. The post mortem appearances, viz., absence of the membrana tympani and ossicula on one side, the semicircular canals being filled with caseous matter, in a fourth case, one related by Dr. Edwards, in the *London Med. Gaz.* for Feb. 1840, p. 793. Underwood has known the ears imperforate, the concha and meatus being wholly obliterated. In Graefe and Walther's *Journ. fur Chirurg.* xix, 1, is a remarkable casetof absence of the external ear and obliteration of the meatus. Instead of the right ear, thre are three protuberances, not cartilaginous, and on the left side one. The meatus is either deficient, or closed by common integument, but the hearing is not much impaired. A third ear has often been found.

Of the Eye.—The congenital malformations of the human eyes and eyelids are exceedingly numerous, and, in a physiological point of view, of the highest interest. But as I restrict myself, with very few exceptions, to the strictly pathological anomalies of the fœtus, I shall here abstain even from naming them, referring the reader to Otto's *Path. Anat.* by South, and particularly to the elaborate observations "on the original malformation and total want of eyes in man and the lower animals," by B. W. Seiler, Dresden, 1834, and to the analytical review of the work in the *Med. Chir. Rev.* for April of the same year, for all information on these points.

A physician of this city informed me he had met with a congenital *mucocele.* Dr. Farrar relates the case of newborn triplets, in each of whom the *cornea was quite opaque.* Wardrop, in his work on the Eye, refers to several cases of congenital *tumours growing on the cornea,* as also Middlemore in a recent No. of the *Med. Chir. Rev.* Graefe has seen cases of *Telangiectasis* of this membrane. *Staphyloma corneæ* is common. The existence of congenital *cataract and amaurosis* is perfectly well known. Kiesir, (in Himly and Schmidts *Opth. Bib.* vol. iii.) had seen hereditary congenital *leucoma* of the whole of the cornea except one lozenge shaped portion in the centre, which was perfectly transparent. Morenheim has observed the *arcus senilis* in a fœtus, and Andry, *Journ. des Prog.* vol. i. 1830, p. 195, states that he had witnessed a complete *obscuration of the corneæ* of both eyes in a newborn child; they were pearly white and of considerable consistence.

Of the Nose.—Congenital malformation of the nose usually occurs in conjunction with other monstrosities. The following very curious instance of congenital *nasal polypus*, occurs on p. 77 of the *Cat. of Soemmering's Mus.* "Monstra, 26. Fœtus ingenti polypo faucium, capitis molem superante, quinimo polypi minores *per nares* penetrant." Voisin, also, is cited by Andry, as describing an enormous congenital polypus, entirely filling the mouth, shapeless, angular, as big as a nut, situated on the posterior part of the palate, to which it adhered by an osseous pedicle. It was successfully removed on the very day of the child's birth.

Of the Mouth.—The mouth may be either imperfectly developed, (atelostomia,) or wholly wanting, (astomia.) Of congenital astomia and absence of the nose, M. Littre has given an interesting case in the *Mem. de l'Acad. Roy. des Sci.* 1701. With the former of these malformations, the bones of the face, the upper and lower jaws, are often found imperfect, or wholly absent. The lips, one or both, may be absent, in which case the whole interior of the cavity is exposed to view. They may be simply adherent, or united by a membrane, and lastly, they, with the bone and soft palate, may be so divided as to constitute the varieties of that common and well known congenital deformity, *hare-lip.* In a vast majority of cases this is confined to the upper lip, but Meckel and Schubarth have each recorded cases in which the lower one was divided. Billard's 96th obs. is one of a very curious congenital smallness of all the parts which constitute the mouth, which he relates in detail. Underwood once saw the mouth much wider on one side than on the other: it appeared as if it had been divided far into the cheek. The deformity was remedied by an operation. M. Veron related at a session of the Royal Academy of Medicine, some cases of "Muguet," very similar to what we term aphtha, from which he infers that it may be developed in the fœtus. Some cases of the same kind are described in Cruveilhier's *Anat. Path.* 15 livraison.

Torticollis, a disease arising from a disparity in the length of the sterno-cleido mastoid muscles, owing to a degeneration of the proper tissue of that on one side, is met with as congenital. For some other anomalies of the muscular system, I refer to the 34th vol. of *Dict. des Sci. Méd.* p. 182.

In pursuance of my plan of treating of the external affections of the fœtus, before speaking of those which interest the internal organs, I come next to

Deficiency of the Abdominal Parietes.—A very remarkable case of this deviation from the natural structure, is recorded by Dr. Montgomery, in the *Dublin Med. Trans.* N.S. vol. i. 1830, in which nearly all the abdominal viscera and the intestinal canal, were exterior to the integuments of the abdomen. "Millett," says Billard, "has reported in Vandermonde's *Journ.* May, 1756, the case of a woman who was delivered of a child in whom the whole stomach, small intestines, colon, mesentery, left kidney, and superrenal gland, and the spleen, had passed out of the belly through a round hole half an inch wide, situated in the umbilical region, two lines from the navel, and hung down to its thighs. It died in two hours. The peritoneum and epiploon were totally absent. The pancreas did not exist and the liver was enormously large. A case is related in the *Amer. Journ. of the Med. Sci.* for Nov. 1836, by Dr. Campbell, of Albemarle Co. Va., in which "the anterior parietes of the abdomen, between the xiphoid cartilage and the symphysis pubis, the ends of the false ribs, and the spines of the ileum, were deficient, the bowels being covered with a thin membrane only, which was ruptured before delivery. There was no appearance of an umbilicus, except a single very small artery, without either vein or external covering, which issued from a point midway between the last false rib and the spine of the ileum, where the muscles and skin terminated. Other malformations existed in the limbs; the vagina ended in a cul-de-sac, and the internal genital organs were deficient. There was but one kidney, larger than natural, attached to the diaphragm about in front of the stomach. All the other organs were normal. In a note on p. 282 of the Am. ed. of *Gooch's Lectures on Midwifery*, the editor, Mr. Skinner, describes a case of this kind, in which the abdominal parietes were entirely deficient, the viscera were neither formed nor placed naturally, and were covered only by a thin transparent membrane. There were no large intestines and no bladder, &c. The February Number of the *Am. Journ. Med. Sci.* for 1838, contains a case by T. Currell, M. D., of S. C. The viscera could be easily seen, as well as the liver, through the investing membrane, and were much inflamed. The child lived two days.*

Cleft through the Sternum.—In the first volume of the same Journal, Doctor Tucker relates a case of this kind.

CONGENITAL AFFECTIONS OF THE SKELETON.—The following abnormal congenital conditions of the bones, are enumerated by Meckel, (*Man. of Gen. and Descr. Anat.* Doane's ed. vol. i,) 1. Congenital deficiency of the cartilages of the ribs. 2. Deficiency of vertebræ, or of some parts of them, as in spina bifida. 3. Absence of sternum. 4. Openings at the lower part of the body of the bone, or in the xiphoid appendage, or fissure of that appendage. 5. Deficiency of the usual number of ribs; shortness; consolidation; (Otto, p. 208, note 2,) anomalous curves, or supernumerary ribs. 6. The congenital conditions of the bones of the head and face, in acephalia, encephalocele, hydrocephalus, and hare lip. 7. Deficiency of the humerus, or one, or both bones of the fore arm. 8. Total or partial deficiency of the bones of the hand; increased number of the same; fusion of one or more bones of the fingers. 9. Loose connection of the ossa pubis. 10. Total, or partial deficiency of the bones of the thigh, or one, or both bones of the leg. Otto is rich in information on this subject.

1. *Smallness of the Head.*—M. Cruveilhier in his *Anat. Path.*, states that he saw a child, which lived eighteen months, with a head so small that

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* A very interesting case in which a portion of the anterior parietes of the thorax and abdomen were deficient, is related by Dr. Thomas Robinson, of Petersburg, Va., (Am. Journ. Med. Sc., Feb., 1833, p. 346,) and a similar case has been communicated to the Provincial Med. Assoc., by Dr. John O'Brien, of Bristol, (Am. Journ. Med. Sc., Nov., 1838, p. 192.) Editor.

it was like that of one of the lower animals. The vertical diameter of the cranium was one inch. It gave no sign of intelligence whatever. The cranium was filled with a brain which differed from the healthy one only in the smallness of its dimensions.

Billard has often seen the osseous fibres of the head bones, instead of going from the centre to the circumference, interrupted, and arranged in small isolated masses, between which was placed a cartilagiform substance. He also saw a considerable depression of the anterior and lower part of the right parietal, apparently owing to some compressing cause applied during ossification. A case is cited by Otto, p. 16, from Frank, in Textors *Neuem. Chiron.* vol. i, pt. II, p. 261, of a woman, who had, on the back part of the pelvis, a bony tumour, and bore four children, each of whom had a deep indentation, and an unossified spot in the forehead. Otto also speaks of a shortness of the lower jaw, causing death by preventing sucking.

2. *Lateral depression of the Chest.*—This was originally described by Dupuytren, in the 5th vol. *Rep. d'Anat.*, as having been frequently noticed by him. It consists in a depression of the sides of the chest, a proportional projection of the sternum and abdomen anteriorly, and of the vertebral column posteriorly. The lateral depression, in some cases, is such as that the two sides of the chest may be embraced by the fingers of one hand. It is attended generally with a constitutional cachexy, and is susceptible of alleviation by treatment, both regimenal and mechanical, which Dupuytren points out. Billard has cited a case of this kind, ending in death at ten months from dyspnœa. The heart and lungs were healthy, but much compressed by the flattening of the walls of the chest.

3. *Mollities Ossium.*—Rachitis. A notice of this disease in the fœtus, occurs on p. 75 of Sœmmering's Cat. "Monstra 2. Puella neonata, mollitie ossium laborans." Pinel, in his *Médecine Eclairée Par les Sci. Phys.* vol. i, p. 3, mentions having the skeleton of a cachectic fœtus, whose bones were all softened and twisted, and the cranium membranous. Chaussier had also met with it. Sœmmering attributes it to inflammation of the bones. Bourgenaud has written fully on congenital distortions in the *Ann. de la Soc. Med. de Montpelier*, vol. i, pt. i, p. 182.

4. *Gibbosity of the Pelvis.*—A case of this kind, very solid and projecting, situated above the pubis, occurring to M. Miart, is mentioned in Velpeau's *Tokology* as a cause of dystocia. Another occurs in Baudelocque.

5. *Fungus Hæmatodes.*—Dr. Tonnilé, *Journ. des Prog.*, vol. xiv, relates that an enormous tumour of fungus hæmatodes, was attached to the right parietal bone, forming a kind of double head, and the base of which medullary sarcoma appeared to be seated in the medullary tissue of the cranium, which it perforated like a sieve. *Med. Chirurg. Rev.*, October, 1829. This case is unique.

6. *Tumours* have been observed upon children at birth, such as encysted steatomatous, lardaceous, purulent, bloody, &c. In one situated in the iliac region, Chaussier found a sort of oblong cartilaginous spine, rising from the crista of the ileum. Denman makes this quotation from Ruysch, *Obs. An.*, 52, Francis ed. p. 408. "Partus difficilis, a tumoribus e capitibus fœtum dependentibus." Dr. Paul amputated the thigh of a child seven weeks old, for well marked *fungus hæmatodes* of the leg. At birth two tumours were observable, the one running into the other; the lower one said to be as large as a turkey's egg; the lower less. *Med. Chirurg. Rev.*

January, 1834. A paper on a "Peculiar Form of Congenital Tumours of the Neck," has been published in the *Med. Chirurg. Trans.*, 1839, vol. xxii, by Mr. Cæsar Hawkins. Mr. H. adverts to a great variety of congenital encysted tumours occasionally found in infants, and describes seven cases of tumours of a peculiar form in the face and neck, composed of many cysts united together, and having in them so large a portion of organized matter, as to give them a solid character. In his first case, the child was eight months old when seen. The tumour at birth was the size of a small orange. In the second, one year, and the tumour about the same size, not having increased materially. In the third, eleven weeks, it had suffered from its birth severely from suffocation, and died in a few days, from that cause, suddenly. The tumour, as large as an orange, on the right side of the neck, was composed of probably many hundreds of small cysts, varying in size from a pea to a walnut, closely joined, composed of a delicate membrane, and containing in most, a transparent, and in others a reddish coloured serum. The cysts extended behind the pharynx and œsophagus, some as high as the basilar process, others as low as the sixth cervical vertebra, embedded in the common cellular texture. Little was to have been hoped for from an operation. They may be mistaken for fatty tumours, or subcutaneous nævi. Otto, p. 173, note 4, speaks of a deficiency of the zygomatic arch, in consequence of the pressure of a congenital tumour on that region, and on his 198th page, cites Friedlieb as describing children born with large encysted tumours on the back, not spinæ bifidæ. He states too, that once, in a newborn child, he found an irregular shaped, angular, and rather long piece of cartilage, on the sterno-mastoid muscle. On his 226th page, note 4, he mentions a child who had on the inside of its upper eyelid, a tolerably large swelling, consisting of firm cartilage, and closely attached by a neck to the interior of the orbit. The following case from Otto, p. 370, (South's Trans.) note 1, may with propriety find a place here. "In a newborn child, with large dropsy of the head, I found, situated externally upon the skull, between the common integuments of the head and the membranes formed by the dura mater and pericranium, many flat adipose tumours, with much black hair, and surrounded by the cellular tissue. One penetrated the dura mater, and projected inwards in the form of several smaller similar swellings, which lay on the dura mater and arachnoid

7. *Fractures.*—The following very remarkable cases of spontaneous fractures in the fœtus, will be found in the *Dict. des Sci. Med.* art. Maladies du Fœtus, p. 62. In November, 1803, a full grown and apparently healthy child was brought to the Maternité. While being dressed, its limbs were observed to possess an unusual mobility, and on closer examination, the bones of all the limbs were found to be fractured nearly in their centres. The child died in a few days, and on dissection, all the large bones were found broken, some in their centres and some elsewhere. The larger number of the ribs, and some of the bones of the cranium, had sustained a similar injury; forty-three fractures in all were counted, some of which had begun to reunite, and some were perfectly consolidated.

A second child, seen in 1815, which lived a day, presented something extraordinary in its external conformation. The bones of the limbs were thick, wide, short and curved, and their surfaces irregular, and all separated by deep furrows. On removing them, they were flexible in the middle, and a crepitus, more or less distinct, was discoverable. Some of the fractures were already united. The periosteum was white and very thick in those parts which still crepitated. M. Chaussier detached a portion of the periosteum which covered the tibia, and saw that the transverse surfaces were red, uneven, and formed of small granules, interwoven with laminar filaments, which extended from one surface to the other. The united places presented a little whitish, cellular elevation. The muscles enveloping the fractured long bones of the limbs were thick, folded and flexed in their length. The spine, pelvis, and lower jaw were uninjured, but there were seventy fractures of the ribs, some consolidated and marked by a long callus. The whole number of fractures was one hundred and thirteen. No cause for these accidents could be assigned in either case. (*Bull. de la Fac.* No. 3, 1813.) Devergie, in the same work, 1825, p. 178, relates that a woman struck herself against a table when six months pregnant. The child was born with a voluminous tumour on the right clavicle. It died on the 8th day, and the fragments were found riding a little on each other, and consolidated by a solid and large callus, which formed the tumour. Carus has related a case of fracture of the tibia, to be presently mentioned.

A woman was delivered prematurely of twins, one of which had a fracture of the left femur. The bone had pierced the flesh, was square, and protruded more than an inch. Some weeks previously, the mother had felt, on a sudden movement of the fœtus, a snap in the uterus like the breaking of a stick, and had ever since felt a pricking pain in the belly. Schubarth in a German Journal, copied in *Journ. des Prog.* vol. vii, page 247. Amand delivered a woman of a dead fœtus of five months. The bones in the middle of the forearms, thighs and legs, were separated and movable, as if broken on purpose, and seemed connected only by skin. *Nouv. Obs. sur la prat. des Acouch.* (Andry.) The famous case related by Malebranche, is well known. Hartsoeker, (*Suite des Conj. Phys.* Amstel. 1708,) and Muys (from Bidloo) D'Muscartif, fabrica, 1750, have cited similar cases. The following case of *False Joint*, occurs in Billard, *Obs.* 85; "On examining a child two months old, I perceived that the humerus was movable at its middle part, where a sort of false articulation existed; a solution of the continuity of the bony structure for an extent of four lines, the space being filled with a pretty thick cartilaginous substance, whose extremities were in contact with the roughened ends of the bones. It would appear as if a spot on the bone had, by some singular anomaly, not ossified. Blundel (*Obstetrics*) had seen four fractures in one fœtus.

Luxation.—Hippocrates, in his treatise De Articulis, mentions several species of luxation, which may occur to a fœtus in utero. "A few years ago, a child was placed in the Maternité, who had both thighs, both knees, both feet, and three fingers of the left hand luxated, which Chaussier supposes always to depend upon some disease sustained by the fœtus in utero." (*Dict. des Sc. Méd.* Art. Fœtus.)

In the *Gaz. Méd.* for 1835, is a case of congenital luxation of the femurs, observed in a girl 11 years old. To this case, M. Pravaz has appended a note on the treatment of congenital luxations citing a remarkable case (of cure) and referring to the observations of Paletta, Dupuytren, (in Breschet's *Rep. Gén. d'Anat.* vol. v. part 1, p. 110,) Humbert and Breschet. M. Pravaz' Article on the orthopœdia of the pelvis, (in the *Dict. de Méd.* 2d ed. vol. v, p. 95, 'Bassin,') and also the able report of M. Gerdy, on two memoirs by M. Pravaz, relating to the causes and treatment of congenital luxation of the femurs, published at Lyons in 1820, contain the best information relating to our present knowledge on this subject. See also Billard and Cruveilhier.

"There is," says Ollivier, (*Moelle Ep.* vol. i, 2d ed. p. 51,) "a species of deformity, which it seems to me that authors have not sufficiently observed, though very common, viz.

Congenital Shortening of the Arm, which is sometimes such that the humerus seems only two-thirds or half of its natural length. Though met with in both arms occasionally, it is oftener seen only in one. As yet, I have dissected no subject presenting this defective conformation, and know not whether, in the latter case, it be connected with a diminution of the corresponding half of the swelling of the medulla spinalis or not." This point, therefore, is open for investigation. Rostan speaks of "congenital atrophy" of the limbs, but whether of the soft tissues slone, I cannot say. "Of congenital shortening of the limbs," says Otto, "Meckel has collected several cases; see his Schreger, *Chir. Versached*, vol. ii, and mentions three children in one family, born with shortening in the *thigh*. Duges, in the *Med. Ep.* of Montpellier for July, 1826, has written on congenital paralysis and agenesia.

Spontaneous Amputation of the Limbs of the Fœtus in Utero.—This mutilation has been ably treated of by Dr. Montgomery of Dublin, first, in the early part of 1832, in *Dub. Journ. Med. Sci.*, vols. i and ii, and at more length in an appendix to his erudite work on Pregnancy. Since the first of these publications, a most excellent paper has appeared from the pen of Dr. Simpson, in the *Dub. Journ.* November, 1836, vol. x. p. 220, into which he has collected a vast quantity of curious information, many interesting cases from authors, and not a few from his own observation. Vassal in the *Gazette Médicale*, 1835, gives a case in which a fœtus was born with only one arm, the scapulo-humeral articulation being covered with a circular cicatrix. The humerus, radius, and ulna, were found in the patient's bed. The case contributed by Dr. Fitch, in the Number of the *Am. Journ. Med. Sci.*, May, 1836, is republished by Dr. M., in which the foot had separated at the ankle-joint, and what is very curious, the healing process in it had been as perfect, and nearly as rapid as that on the lower extremity of the limb, although the former escaped per vaginam on the 17th of March, and the delivery did not occur until the 5th of April. The same singular circumstance occurred in the case cited by Veiel, (Simpson), the fore foot being born of itself quite healed. Chaussier saw two children who wanted each a part of the fore arm. The stumps presented compact whitish cicatrices, *Dict. des Sci. Méd.* In vol. x of the *Arch. Gén. de Méd.*, is a case published by Billard, and originally occurring to Dr. Watkinson, of a complete division of the left foot above the ankle, in a living seven months fœtus. The amputated limb was cicatrized, except in the centre. The foot lay in the vagina, and it also was cicatrized, except where the bone projected. It offered no traces of putrefaction, and had from its size probably been separated about two months. (Andry.) I shall not further lengthen this article by detailing cases to which all may have access, but shall merely append, as confirmatory of the idea entertained by Montgomery and Simpson, "that the thread like membranes, which stricture the limbs, and so prevent their developement, consist of organized lymph, such as is usually elaborated under the influence of inflammatory action, from which it is well known that many varieties of fœtal deformities arise," (see St. Hilaire's work on Monstrosities;) that a case occurred to M. Morlanne, where a fœtus of five and a half months, was born with adhesions of the legs and thighs to the breast and abdomen, six weeks after the discharge of the waters, the absence of which probably induced the parts to come into contact, and inflame; (Gardien. *Journ. des Acc.* vol. ii, p. 173,) and that Newnham, (vol. iii, *Med. Repos.*) cited a case of preternatural ligament, different from the funis, tightly coiled around the *left leg*, which was enormously swelled, making a deep sulcus. Two cases are mentioned by Montgomery, where the coiling of the chord caused equally a deep dentation. It is remarkable, that in a large proportion of the cases recorded by Montgomery, &c., eight out of thirteen, the left leg was affected.) A case is recorded in Siebold's Journal, vol. xvi, No. 2, in which the umbilical chord was wound around the right leg of a three months fœtus forming a knot. The developement of the limb was prevented and the leg was worn down to the bone, the integuments remaining unaltered. In a case by Dr. A. H. Buchanan, (*Am. Journ. Med. Sci.*, August, 1839,) the umbilical chord of a four months fœtus was singularly twisted about the neck and thigh, so as to impede motion and circulation. At the point of compression, only the integuments intervened between the chord and the bone; below it, the limb was fully developed. This case, had the child lived long enough, would probably have resulted in spontaneous amputation. A case, however, which proposes a different explanation of the manner in which some at least of these cases occur, is the following quoted by Andry, from the *Arch. de Méd.*, vol. xvi, p. 444. "Dr. Carus states that a woman, six months pregnant, fell on her belly; at the full time she was delivered of a thin feeble child, which had a transverse wound on its right leg, nine lines long. The edges were pale and flabby, and it passed from one malleolus to the other, involving the skin and subjacent muscles, and was accompanied by a fracture of the tibia. The body of the bone was wholly separated from the lower epiphysis and passed upwards and outwards, out of the wound. It had lost its periosteum, looked badly, and could not be returned, the necrosis increased, gangrene attacked the wound and the child died on the thirteenth day. Andry remarks, that had the child lived longer in utero, complete amputation of the foot would have occurred. I have detailed the above facts with the hope of attracting the attention of future observers to the cause of a remarkable phenomenon, which needs further elucidation.

There is yet a congenital deformity to which I must just allude I mean *club foot*, with its three varieties, Varus, Valgus, and Pes equinus, which is owing to a shortening, or contraction of certain muscles and ligaments, and chiefly the tendo Achillis, with displacement and deformity of the bones of the tarsus. This affection has of late become invested with extreme interest, owing to the successful surgical treatment adopted for its relief, and is treated of at length in the various works on Surgery and Orthopedy, but by no one so recently, or so elaborately as by M. Bouvier, in the 7th vol. of the *Mem. de l'Acad. Roy. de Médecin*, Paris, 1838, to which the reader who desires a full account of the peculiarities and pathological conditions of each kind, and of the opinions as to its cause and nature, entertained by authors of all ages and countries, is referred. Kyllosis, according to Chaussier, occurred 37 times, in 138 cases of monstrosity. Cruveilhier's 2 liv. contains an "anatomical examination of the bones in club feet" with numerous plates of the conditions of the bones and muscles, &c, with remarks on congenital luxations.

A very curious case is related by Joerg, where the curve of the vertebral column was such, that the hind part of the sacrum and coccyx adhered to the posterior part of the shoulders, and the lower extremities were directed to the head, which appeared between them. The abdominal parietes were united. The mother went the full time and the fœtus could not be delivered until the adhesion of the sacrum to the shoulders was destroyed. M. Andry, from whom I copy this case, doubts whether this could occur from muscular contraction, and suggests in a similar case, a careful examination of the bones. Lankirch, (*Hist. Monstr.*) speaks of an individual whose whole body was turned back like that of a rope dancer, and, in the *Hist de l'Acad.* for 1700, a person is mentioned whose body was so twisted, as that the part which is ordinarily on the posterior, formed the anterior part. (*Dict. des Sci. Méd.*)

Absence of, and supernumerary limbs, toes and fingers, and duplicity of these organs, I shall pass unnoticed, and merely add that Paletta in his *Exercitationes Pathologicæ*, states that he had seen three instances of *congenital absence of the gastrocnemii muscles*, and that in a paper in the *Med. Ch. Trans.* vol. ix, pt. ii, p. 433, Breschet details the case of a fœtus, which, among other peculiarities, presented a total absence of the nerves and muscles of the whole of the right inferior extremity, their place being occupied by a species of solid fat.

CONGENITAL AFFECTIONS OF THE INTERNAL ORGANS.

Brain.—Of these I shall briefly mention encephalocele, hydrocephalus, apoplexy, and absence of the cerebral lobes and cerebellum.

Encephalocele is a tumour of the head, in some cases covered by integuments, in others not, depending on defective, or arrested ossification of some of the bones of the cranium, generally at the back part, with protrusion of the whole, or only a portion of the cerebrum. That if the cerebellum, (parencephalocele) is still more rare. Very voluminous tumours of this kind, generally cause the death of the fœtus in the delivery. Smaller ones may exist for years without inconvenience, and indeed have been regarded as steatomas, and operated upon. They may easily be mistaken for cephelamatoma, in the newborn child. Billard's 79th Obs. 1st ed., is one of encephalocele through the squamous portion of the temporal bone, covered by healthy integuments. The child had also a destruction of the skin of the cranium, on a level with the left parietal bone, replaced by a depressed, smooth, vermillion cicatrix, an inch and a half long, and four lines wide. The parietal bone had in it here an oblong opening, about an inch long. A somewhat peculiar form of hydrocephalic hernia has been mentioned, in which a protrusion of the dura mater containing fluid, occurs through a point in the surface of the cranium, generally between the halves of the occipital bone, forming a pendant tumour on the back of the neck. One of the these, seen by Chaussier, hung down to the loins. In the *Amer. Journ. of the Med. Sci.* vol. iv, is a case of parencephalocele upon the occiput, in which the child lived for fourteen hours in a state of insensibility; the hernia consisted of a portion of the medulla oblongata. A great deal of corrupted blood escaped, and the brain and meninges were inflamed. The relation altogether is very interesting.

Hydrocephalus.—I shall speak very briefly, and confessedly very imperfectly, on those diseases which have received already, a large share of professional attention, and must refer to the works which treat expressly upon them. Nothing is better established than the fact that hydrocephalus exists in the embryo, and at birth, and it is thought by Breschet, not to depend on those causes which give rise to acute hydrocephalus. "I have often," says he, "seen apoplexies in new born children, the blood having penetrated and distended beyond measure the vessels of the brain, the meninges highly injected, and extravasations in the cerebral substance. I have often seen the brain gray, soft and almost fluid; in other cases red, white, or more dense and firm, than is natural, and finally, sometimes, the substance of this organ is so permeated with blood as to resemble a mere coagulum, but I have seldom found abundant serous collections, comparable with those which constitute one of the characteristics of hydrocephalus acutus." (*Dict. de Méd.* 2d ed.) The same author makes the remark that M. Baron and himself had often seen, in new born children, in whom the size of the cranium would not have indicated it, considerable quantities of serum, and a very imperfectly developed brain, a state always congenital. Generally, children thus affected, die in a very few days, though some individuals have attained even a very great age, as 79 years. (Golis.) Congenital hydrocephalus is a common cause of dystocia, rendering labour difficult, and often delivery impossible without puncture of the head. Yet it is not, perhaps, as common as might be supposed, having been met with by Lachapelle and Dugès only 15 times in 43.555 labours. As an accessible instance, I may cite case 68, in the 2d part of Dr. Ramsbotham's *Pract. Obs. on Midwifery*. In Cruveilhier's 15 liv. will be found a case of hydrocephalus ventriculorum, with integrity of the cerebrum. A case of what he calls "Encysted Hydrocephalus," is reported by Dr. Houston, in the *Dublin Hospital Reports*, vol. v. p. 327. In addition to enormous dilatation of the ventricles with fluid, various sized cysts existed in different parts of the cerebral substance, unconnected with the ventricles, two as large as an almond, in the site of the formix and optic thalami, two in the anterior lobe of the right hemisphere, and two on the base of the brain, distended with fluid, and lined by membrane.

With regard to its pathological conditions, hydrocephalus may be divided into four varieties: 1st. Where the brain is sound, and even hypertrophied. 2. Where there exits imperfect development of the brain, or absence of some of its parts, (hydrocephalic anencephalia, Cruv. Liv. 15. Hydrocephalus with disappearance of the greatest part of the cerebrum, and integrity of the cerebellum, annular protuberance and medulla, pl. I, fig. 1.) 3. That in which the fluid exists in the ventricles, which it develops, distends and thins extremely: and 4. That in which it lies upon the arachnoid membrane, and forms a soft fluctuating tumour, which sometimes gives way spontaneously during the passage of the head through the pelvis, as Cruveilhier has twice known to occur. The scalp, in these cases, is excessively infiltrated. The able article by Breschet, which I have cited, will furnish every information on this interesting subject, and Otto's *Path. Anat.* p. 378, contains a perfect *resumé* of all the facts known relating to this disease, with copious references.

Apoplexy.—I have, in the preceding article, quoted some remarks by Breschet relating to this disease, which has as yet received but little attention from pathologists. The 2d edition of the *Dict. de Méd.* contains an article on the apoplexy of new born children. For what I shall say, I shall be indebted to the 15th and 17th liv. of Cruveilhier's great work. It appears from the researches of this author at the Maternité, that apoplexy is the cause of death in one-third of those who die in the progress of labour, and the constant anatomical character is an effusion of blood within the cavity of the arachnoid. It lies most commonly on the cerebellum, sometimes on both it and the cerebrum; M. C. has three times seen it in the ventricles, the spinal dura mater being equally distended. Unless the extravasation is very small, this state is never recovered from, though not always immediately fatal, and is generally considered to evince congenital weakness. Generally, but not always, it depends on the protraction of the labour; in some cases, on compression of the chord. C. details seven cases, and I hope that what has been said will induce others to investigate this subject and record the results.

Absence of Cerebellum.—This case is also contained in the 15th liv. Pl. 5 of Cruveilheir: it occurred in a girl who lived to be 11 years old. A gelatinous membrane filled the place of the cerebellum, which M. C. believes to have been congenitally absent. It is a fact opposed to the theory of Gall as to the functions of the cerebellum, that this girl was addicted to masturbation.

Atrophy of the Convolutions of the Brain, (Agenesia,) may be congenital, and is oftenest complicated with hydrocephalus. I shall transcribe Cruveilhier's description of the sixth variety: "It consists in the transformation of the whole, or a portion of one or both hemispheres into a membrane of extreme tenuity, a nucleus only of the brain remaining, represented by the optic thalamus and the corpus striatum, more or less altered. It is most commonly congenital." Facts of this nature and the case of an idiot who had reached his 15th year and had the free use of his limbs, in whom both cerebral lobes were totally wanting, may be found in the *Rep. d'Anat. Path.* by Breschet. The fœtus, generally in these cases, is born with sensible deformity of the limbs, which vary in bulk according as one side or the other is affected, and are afterwards more or less paralytic. Passing inwardly we come to the

Tongue.—This organ may be altogether wanting, double, deficient in some of its component parts, too small, too large, too long and too wide; of all which I could furnish curious examples did space permit. The common congenital affection "tongue-tie" consists in the frenum being attached too far forward, so as to interfere with its movements, and requires to be divided. I am indebted to a paper contained in the 7th vol. of the *Am. Journ. of the Med. Sci.* by Dr. T. Harris of Philadelphia, which describes a most interesting and successful operation for the removal of chronic *congenital enlargement of the tongue,* for the information that is there published in the 1st vol. of the *Mem. de l'Inst. National,* an interesting article on the morbid prolongation of the tongue, by Lassus, in which he notices several instances of children born with this disease; some had been seen by himself, and some he had collected from Caspar Pencer and Zacchias. Dr. H. has also cited the fact that in 1695 the Society of Medicine in Stockholm assembled to examine a girl aged 10 years, who from her birth was disfigured by a protrusion of the extremity of the tongue beyond the mouth, which, as generally happens, afterwards increased much in size. *Act Litterar. et Scient. Sueciæ,* vol. iii, 1732. Bartholinus (*Hist. Anat.*) describes a child whose tongue from birth was larger than those of other children, and ultimately grew to be as large as a calf's heart.

Another example is that of a female described by Percy, (*Dict. des Sc. Med.*, vol. xxvii,) which by the time she had reached her 18th year had amazingly increased; and the same article contains the very interesting case of Philip Hoenhumer, who was born with a very large tongue pendulous from the mouth, which in his 8th year materially increased and was amputated. In the old *Journ. de Vandermonde*, vol. xv, p. 156, is a case by M. Maurant, of a monstrous tongue; it adhered to the gums of the lower jaw by a spongy tumour as big as a filbert, and grew so much that ultimately no distinction could be perceived between them. The tongue ultimately became two inches thick and four fingers breadth out of the mouth, and lodged in a groove on the lower jaw; the child could chew and articulate.

Ranula.—I once, says Billard, saw a congenital ranula. When the child cried, its elevated tongue allowed an irregularly rounded, oblong, transparent, elastic tumour, on the left side of the frenum, fastened to the internal surface of the jaw, occupying exactly the place of the sublingual gland. The child left the hospital and the result is unknown.

The Epiglottis has been found absent by Morgagni.

The Glottis has been known to be obstructed and strictured by a strong membrane, produced by the mucous membrane which lines the part. The child was large and well formed, and the heart and arteries beat with force. It lived only a little while and uttered no cries. *Journ. des Prog.*, vol. iv, p. 119, Rossi, cited by Andry.

Tonsils.—Hypertrophy of the tonsils, says Andral, may exist unattended by induration. It is frequently accidental, but may be congenital.

Pharynx. Complete absence of the pharynx, as yet has been observed only in acephalous monsters. The following malformation is related by Dr. Houston in the *Dub. Hosp. Rep.* vol. v. "A male child, who died the day after its birth, having on every attempt to suck disgorged its milk with fits of suffocation, was found to have the pharynx terminate in a cul de sac some way down the neck, without having any connection with the œsophagus. The larynx was perfect, but the posterior wall of the trachea was perforated by a large opening from which the œsophagus took origin, and which appeared so smooth and oblique as to render the passage from the larynx into that tube, as direct and as easy as that along the trachea into the lung." Andral states that it has been found to terminate in a cul de sac at each of its extremities and to present a partial dilatation, in some cases constituted by all the tunics, in others only by the mucous membrane, forming a hernia through the muscular tunic.

Œsophagus.—The malformations of this organ are numerous. Sir A. Cooper has recorded a case in which it was totally deficient, the pharynx terminating in a cul de sac, and the stomach having no cardiac orifice. The child lived 8 days. Billard cites one precisely similar, occurring to Dr. Sonderland, for the *Journ. Comp. du Dict. des Sci. Méd.* In the case published by M. Martin, in the *Observateur de Sci. Méd.* Marseilles, 1825, there was no trace of the pharyngeal extremity of the œsophagus but a canal of a few inches in length, ending in a cul de sac, the trachea and stomach communicated. Dr. Blundell on the 50th page of his Obstetricy, mentions three cases in which the œsophagus was represented by a mere ligamentous chord. In a case by Von Cuych, the œsophagus terminated at a short distance from the stomach, and Velpeau, (*Tokology*, p. 214,) states that he dissected a fœtus, full grown, whose œsophagus on reaching the diaphragm, ended in a cul de sac. Meckel has figured one which bifurcated opposite the first rib, the branches continuing distinct until they arrived opposite the 6th, when they approximate, unite closely, and at last the œsophagus becomes single again. Blasius (*Obs. Med. Paris*, 4..*obs.* 7. p. 52,) had twice seen it *double.*

The only pathological condition as yet described is *Ulceration.* Billard, (in his *Mal. des Enf.* p. 288, obs. 20. 21. 2 Fr. ed.) states that in two cases in which new-born children died a short time after birth, he found ulcerations of the muciparous follicles in the œsophagus and stomach, which must have been developed within the uterus, and by their progress after birth have hastened death. The second of these cases is especially remarkable. The mouth was injected, the pharynx very red, and its inner membrane rather tumid. On the upper part of the œsophagus were two almost parallel ulcerations, each about four lines long, yellow at the bottom, the edges sloping and presenting, as well as all the upper third of the œsophagus, a carmine redness. Stomach and intestinal tube very much congested, with sanguineous exudation throughout the digestive tube.

Before I proceed to a consideration of the pathological states of the organs within the abdomen, I shall cite from Lieutaud, *Obs. Anat. Med.* obs. 792, the following case from Diemerbroeck, of a congenital *Deficiency of the Diaphragm.* "Puer asthmate chronico, at frequente tussi ab incurabilis vexatus, tandem septimo anno ætatis extinguitur. Nullum repertum diaphragma, desiderabatur etiam medrastinum. Pulmones vero a solita forma degener, uni cum lotum præbebant.

Stomach.—The congenital malformations of this organ may be briefly stated in the following order: 1. Total absence. 2. Deficiency of a cardiac orifice. 3. Separation from the duodenum. 4. The great extremity wanting, the œsophagus entering the left. 5. Division by a central contraction into two cavities. 6. Extreme smallness, so as not to exceed the size of the small intestine. 7. Great size, so as to fill almost the whole abdominal cavity. 8. Lateral transposition in common with the other viscera, to be mentioned hereafter. 8. Considerable contraction of the left orifice, with absence of the pyloric valve. (Fleischman.)

Mons. Billard relates 15 cases in which there was every reason to believe that *Gastritis* (follicular ulcer) existed previous to birth and caused a speedy death. Several of the patients had severe lesions in other organs; one had no other than an ulceration in the stomach exactly resembling those of phthisis. Plates 3d, fig. 4, 5, 6 of the 15 fasciculus of Cruveilhier's *Anatomie Pathologique*, represent this lesion in the stomachs of children who died, one on the 8th, one on the 15th, and a third on the 30th. day. The ulcers in fig. 4, had a yellowish base and broad red edges. The inner surface of the stomach in fig. 6, is very dark, and contained it is said, much dark matter. The bottom of the ulcers is also dark, and the edges red and narrow. In the stomach represented in fig. 5, I counted thirty-three. Figures 1, 2, 3, represent the same disease, which he calls "Muguet" with pharynx; mouth, whole of œsophagus and ventricles of the larynx. Mons. Denis, in his "*Recherches Anat. et de Phys. Path, sur plusieurs maladies des enfans nouveau nés*," 1826, p. 139, has cited some cases of these follicular ulcerations. In a male child who died in a few moments after birth, the lungs were imperfectly developed, the flesh soft and infiltrated, the skin red, the stomach presenting a superficial ramollissement of its mucous membrane, whitish with vivid injection; that of the small intestines equally injected and covered with a creamy exudation. A stricture existed near the cœcum and the large intestines were distended with meconium. The 6th volume of Broussais' *Ann. de la Méd. Physiol.* p. 139, contains cases of congenital arachnitis, gastritis, and gastro-encephalitis.

Intestines.—Cases are recorded in which the alimentary canal was singuarly shortened, the convolutions of the small intestines being less numerous, or altogether wanting; and the length of the alimentary canal from the cardiac orifice scarcely equalling, or even falling short of that of the individual. Thus in the case of the man mentioned by Cabrol, whose stomach was so large that it filled a great part of the abdomen, the great and small intestines together scarcely exceeded the length of three feet. The gastro-intestinal canal has been found as a straight tube, which, commencing at the entrance of the œsophagus in the stomach, terminated with the rectum in its ordinary situation. The small digital appendices, called *diverticula*, by which the extent of the alimentary canal is sometimes increased, are congenital anomalies; as many as six have been found in one subject. In the 15th fas. of Cruveilheir's great work, obs. 7, in conjunction with disease of the pancreas and lungs, oblong, whitish, elliptical plates were found, with considerable thickness of the walls of the intestines. These plates were strewed with petechiæ, and in some points, the thickening was such that the calibre of the intestine seemed to be completely effaced. Dr. Francis has mentioned a case of extreme atrophy of the intestines on the 602d page of Stewart's translation of Billard. The subject of hernia I shall advert to, after some observations on the conditions met with, of particular intestines.

Duodenum.—It has been found as large as the stomach; in one case, immediately below the pylorus, it divided into two canals, which reunited at about one-third of an inch above the jejunum. (Calder. *Edin. Med. Mem.* vol. v.) M. Billard, in his most philosophical and instructive work, page 362, 2d ed., has given an analysis of the curious case, published by Dr. A. Schaefer, in which the duodenum of a child which lived seven days, was so much distended as to exceed that of an adult in size. The third part of this intestine after having passed through the meso-colon, ended in a cul de sac. It was full of a brown liquid. Its width was an inch and an half, and its length nine inches and ten lines. The rest of the canal was very narrow. The remainder of the small intestine was thirty-four inches long *by two and a half lines wide;* the large intestine twelve inches six lines by two and a half lines. The cœcum was two lines long, its appendix twenty-one lines. This case is contained in the *Journ. Comp. du Dict. des Sci. Méd.*, vol. 24, p. 58, and in the essay, Dr. S. has enumerated almost all the analogous cases mentioned by authors, with many learned reflections on the possible causes. M. Billard himself details an analogous case to which I refer the reader.

In a case by the same author, (2d ed. p. 390, Obs. 43,) hereafter to be again alluded to, I find the following remark: "Some transverse striæ existed in the duodenum; in the middle of the second part of this intestine was seen a pedunculated excrescence, red and irregular like a strawberry. It was as large as an ordinary bean, and adhered firmly by its peduncle, to the surface of the mucous membrane, on which it was developed. Its structure was spongy, but not erectile. It was easily crushed between the fingers, and doubtless had some analogy to warts on the skin."

Ileum. In the same case, it is further stated that, at the end of the ileum, existed a chronic inflammation, characterised by thickening of the mucous membrane of a very marked slate colour. In the following one, No. 44, "the wall of the intestine began to thicken near the termination of the ileum, and became more so as it approached the cœcum. The ileo-cœcal aperture was much contracted, and the valve of Bauhin, much tumefied, indurated and red. This thickening chiefly resided in the submucous cellular tissue, which presented the anatomical characters assigned by Laennec to scleroma. The mucous membrane, however, also was rather thickened, very red, and in particular, very friable. Dr. Blundell, in his obstetricy, mentions that his museum contains a specimen of obstructed ileum, in which, on the gastric side of the closure, the gut is enormously distended, and on the other, much contracted. Dr. J. W. Francis, of this city, has described in the Am. Med. and Ph. Reg. vol. i, a case of deverticulum from the ileum, in a man aged 35, who died of enteritis. Solutions of the continuity of this intestine have also been met with.

Cœcum.—The cœcum may be completely deficient, in which case the ileum opens directly into the colon. It may be much larger than natural, or provided with a remarkably large diverticulum, or lastly, really double, presenting two large culs de sac, one of which communicates with the colon. Fleischman describes one which was completely bifurcated.

Colon.—The colon is not unfrequently remarkable for its excessive length; two have sprung from a single coecum, and reunited at the rectum, (Brugnoni,) and Meckel, in his fas. *An. Path.* has represented one simple in its origin, then separated into two cavities by a central partition, and at last, branching out into two dilated portions of unequal size which float freely in the abdomen, and end in a cul de sac. The transverse colon sometimes passes in front of the stomach, sometimes is covered by it, and sometimes has its convex side turned downwards. Littre, in the *Mem. de l'Acad.* 1709, relates that the ileum, in a case seen by him, ending in a cul de sac, the large intestine was wanting, all save a little duct three lines long, which opened by a small round hole above the pubis, and formed an *artificial anus* for the escape of meconium. The erudite Dr. Francis, in a letter appended to Stewart's translation of Billard, says "an instance came to my notice some years ago, of the small intestines, so called, being in reality the larger, while nearly the whole tract of the colon and rectum was diminished in calibre, so as scarcely to admit the passage of a crow quill. The child lived four days."

The sclerosis of the duodenum mentioned in Billard's 44th case, as affecting the ileum, involved the colon also. It is entitled "Chronic Colitis—Sclerosis of the Colon."

Rectum.—This intestine is often found to end in a cul de sac, which condition may, or may not coincide with imperforation of the anus. I think it unnecessary to increase the already extended limits of this paper by references to this very common malformation. The symptoms which result from it may be found minutely detailed in Billard's 39th and 40th cases. The same author says that he saw an operation for the establishment of an artificial anus performed by M. Ouvrard of Angiers, upon an infant deprived of a rectum, whose colon ended in a cul de sac at the upper extremity of the sacrum. "I have seen," says Baillie, *Morb. Anat.* vol. ii, page 165, "the rectum terminate in the bladder from malformation, so that there was no other external opening to the rectum, than by the urethra. The rectum sometimes ends in the vagina, but this is uncommon. A curious case of unnatural coalition between the rectum and bladder, is recorded in the Comment. Gotting. ad ann. 1778. In the 1st liv. of Cruveilhier, is the plate of a child whose anus was imperforate, and a congenital *fistulous* passage ran along the perinæum, and opened on the lower surface of the penis. It lived nine days. Having mentioned here a case of congenital fistula, and having omitted to introduce it in the proper place, I will just call the attention of the reader to the review of a paper in the *Med. Chirurg. Rev.*, April, 1834, page 481, entitled "De fistulis colli congenitis, adjecta fissurarum branchialium in mammalibus, aribusque, historia succincta. Berol. 1832," by Dr. Ascherson. Of this curious congenital anomaly, Dr. A. has seen eleven cases. On the anterior and lateral part of the neck, generally on the right side, is observed a fistulous opening, having a very narrow aperture, surmounted or not by a papilla. A probe generally penetrates but a very little way, owing to the sinuosities of the canal, but in one passed into the pharynx. Air never escaped, but the discharge was clear, viscid, or rather puriform. Rudolphi had seen the closing up one of them bring on convulsions, which ceased when the discharge was again permitted to flow.

Congestion and Inflammation of the Intestines.—It appears from the researches of Billard, that nothing is more common than to meet with more or less congestion of the mucous membrane of the intestines of new born children, especially in the plethoric, or in those who have experienced some delay in the birth; nor is this condition unfrequently attended with hæmorrhage, which, in many of those who live but a short time, becomes the cause of death. In many cases it gradually disappears; in others, ends in inflammation. Billard's 40th case is one of enteritis, accompanied by imperforation of the anus. There were pretty red patches on the mucous membrane of the stomach, general redness and tumefaction of the internal membrane of the small intestines, and many muciparous follicles, each surrounded by a circle of inflammation. M. B. briefly details the post mortem appearances in ten other cases. "It is even reported," says Underwood, "in the Phil. Trans. that Lille Van Doeveren has discovered *worms* in the stillborn fœtus, but this is much doubted." Andry mentions that Dolæus and Schricter have met with bundles of worms in the intestines of the fœtus, and that Rosen (*Diseases of Children*) mentions two affected with tænia, *Abdominal Glands.* Ochler, according to Desormeaux, (Article *Oeuf. Humain, Dict. de Med.*) had found the glands of the mesentery tumefied, adipiform, hard, in short, scrofulous. Cruveilhier (*An. Path.* liv. 15, Obs. 2,) states that large, indurated lymphatic ganglia surrounded the hepatic duct in a fœtus which presented several other lesions. In two stillborn fœtuses, says Billard, I observed a very evident tubercular transformation of some mesenteric glands.

I could not fail to allude in these pages, to the curious congenital, though not pathological condition of the viscera, called *Lateral Transposition*, in which some, and generally all, occupy a position opposite to that in which they are naturally placed, the stomach being to the right, the liver to the left, &c. As it presents no practical interest, I must be very brief, and after hastily citing Dr. Baillie, refer the reader to a list of references, than which I have not myself met with any more copious. In the first vol. of the works of Dr. B., edited by Mr. Wardrop, is a minute account of all the particulars of this phenomenon, occurring in the body of a man of 40. Dr. B. remarks that he has consulted many authors on this subject, with little satisfaction, and has only found this singular lusus described by Cathericas Mery and Daubenton, and in a note on page 160, states that Mr. Payne had shown him a fœtus with all the viscera transposed. Mery's case is in *Mem. de l'Acad. des Sci.* 1658, a soldier, ætat. 72, viscera, arteries and veins. Blegny, *Zoo Gallic*, June, ann. 2, obs. 9, page 129; man of 18. Riolanus (*Disq. de trans. part. &c.* 1652,) a murderer executed at Paris. Otto *Path. Anat.* page 29, note, had seen two cases of "translocation," numerous references. Parisot, *Arch. Gén. de Méd.* June, 1839, young man of 25; complete, 1836. *Med. Chirurg. Rev.* 1836, cœcum natural, spleen absent, heart malformed. *Amer. Journ. of Med. Sci.* May, 1836, (Raleigh, in *India Journal* for 1834,) complete, viscera and vessels; Nov. 1836, Warren, complete, ætat. 65. Snowden, in *Lond. Med. Gaz.* June 11, boy of 15, conformation of abdominal thoracic viscera and vessels. Blundell, *Obstetr.* page 78; Dunglison's edition, fœtus, complete, abdominal and thoracic. *Med. Chirurg. Rev.* October, 1837, Jamieson, complete, of both; absence of gastro-colic omentum and transverse mesocolon, young gentleman. Houston, in *Cat. of Coll. of Surgeon's Mus. Dublin*, page 61, B. 600, a very full description of an individual, with complete transposition of all the viscera, therein preserved.

In his second contribution to intra-uterine pathology, in the *Edin. Med. and Surg. Journ.* for July, 1839, Dr. Simpson relates some cases of *partial* transposition among the viscera of the abdomen, and endeavours to prove that in some of them, at least, the origo mali seems to have been a morbid inflammatory action during fœtal existence. The chief among these is the displacement upwards and towards the left side, of the caput cœcum and ascending colon, cases of which have been recorded by Saltzman, Schacher, Sandifort and others, and particularly some interesting original cases by Dr. J. Reid, in the *Ed. Med. and Surg. Journ.* vol. xvi. Dr. Simpson's 30th case is one of singular morbid adhesion of the right testis, embedded in a quantity of coagulable lymph, and strongly attached to the peritoneal surface of the right iliac fossa, together with partial displacement of the intestines, particularly the caput cœcum. A great deal of coagulable lymph was effused upon various organs of the body, and the intestines were agglutinated. The descending colon assumed a peculiar disposition, and the pelvic viscera were matted together. In the 31st case, similar evidences of extensive inflammation existed. A fold of the sigmoid flexure of the colon adhered to the peritoneum on the right side of the spine, by morbid adhesion. The cœcum was in the right lumbar region. In a note on page 25, Dr. S. states that Dr. Reid had recently informed him of a case in which the caput cœcum was placed in the right lumbar region, and prevented from descending by strong adhesions of the vermiform appendix to the inferior surface of the liver. To inflammation operating during fœtal life, may plausibly be attributed some of the anomalies met with in examining the bodies of infants and adults, and also some instances of arrested or deficient development, and I refer to the original memoir for the ingenious arguments by which this theory is attempted to be sustained.

To these instances of transposition, I shall add another of malposition, which, with the subject of Hernia, will conclude what I have to say respecting the intestines. "I afterwards," says Morgagni, (vol. ii, page 71, Amer. ed. of Cooke's translation,) "met with a more extraordinary occurrence of this nature, in the body of a female fœtus, for on opening the belly and wiping away the blood which had been extravasated, no intestine could be perceived besides part of the colon and rectum. The remainder, with nearly the whole of the mesentery, were concealed and confined under the concave surface of the liver.

Hernia.—I shall touch very briefly on a disease which is very fully treated of in works devoted to this subject, and merely advert to the fact that there are met with Congenital, Inguinal and Umbilical Hernias. The former of these is occasionally complicated with hydrocele. There is also a variety of congenital inguinal hernia, first described by Dupuytren, which forms while the testis is yet enclosed in the inguinal canal, or retained in its passage through the ring. In this case, the serous tunic, distended by abdominal serosity, stretches before the testicle and forms a pouch into which the abdominal viscera fall. The diagnosis between simple hydrocele, simple hernia, and mere lodgment of the testis, is difficult. Inguinal hernia, according to Dupuytren, is sometimes congenital in females. One case only, of *strangulated* congenital hernia, is on record. It occurred to Mr. W. H. Hunt, *Lond. Med. and Ph. Journ.* October, 1828. The operation was successfully performed, the wound healing in fifteen days. When the tunica vaginalis was incised, instead of a testicle, Mr. H. found a second serous membrane, polished and having vessels running over in a longitudinal direction, in a word, a true sac, formed by the peritoneum. This having been opened, it was seen that the hernia consisted of three inches of ileum, of a chocolate red colour, and requiring for its return a considerable incision of the ring. (Andry.) A very extraordinary congenital inguinal hernia in a girl, is mentioned by Billard in an excellent chapter on this subject. It consisted of the left ovary passing through the left ring and inguinal canal. The uterus was drawn to the left side of the bladder. The cause appeared to be a congenital shortening of the round ligament, and its being fixed more solidly to the labium major than is common.

Congenital Umbilical Hernia is less owing to a protrusion of the abdominal viscera from the belly, than to their not having entered it; its proximate cause can only be a malconformation and defective development of the anterior walls. The viscera and the portion of the peritoneum which forms the sac, lodge in the cellular tissue of the chord, which, with the sac, forms the only covering. They may be very small or very large, and all even of the abdominal viscera (Méry, *Mem. de l'Ac. des Sci.* 1716; child lived sixteen hours; the chord ending in a white, opaque, membranous sac two inches in diameter;) have been found in them. The 7th liv. of Cruveilhier's *An. Path.* pl. 5, fig. 2 and 2′, contains a notice of this subject, which he considers to arise from defective development, and not from arrest. Dr. Simpson has essayed, in the article just mentioned, to adapt this theory of intra-uterine inflammation to the explanation of this phenomenon also. Congenital hernia umbilicalis must be distinguished from the eventration of the intestines previously spoken of, arising from a deficiency of the abdominal parietes, and from the accidental form so common in young children after birth. Next in the catalogue comes

Diaphragmatic Hernia, in which some or all of the abdominal viscera are lodged in the thorax, passing through a deficiency in some part of the diaphragm. It is almost always fatal, the patients being rarely born alive, and being deficient in practical interest, I shall dismiss the consideration of the subject by referring the reader to the following sources of information: Baillie, *Morb. Anat.:* Clarke, *M. C. Trans.*, vol. ii, p. 118; Anthony, *Journ. Hebd.*, Feb. 1835; Cruveilhier, fasc. 17. This case is curious. The patient was 75 years old. The left side of the chest contained the stomach, large, and some folds of the small intestines, some of which were dark and strangulated by the mesentery. C. considers this case to have been *congenital.* Murphy, *Dub. Journ.*, July, 1839; Simpson, *Ed. Journ.*, July, 1839. Dr. S. equally applies his theory to the formation of this disease, remarking that it may be formed by morbid adhesions to the lungs or pleura, of the looser abdominal viscera, which are dragged out of place by the growth of the more solid organs within the chest. "Hence," says he, "in the case by Clauder, (in *Eph. Nat. Cur.*, dec. ii, an. v, p. 193, *de ventriculo in cavo Thor. situ congenito,*) strong adhesions united the stomach, duodenum, pancreas, spleen, and part of the colon, to the diaphragm and pleura. Bartholin, *Anat. Rar.* cent vi, vol. 3, p. 287. Chaussier, *Bull. de la Fac.* vol. ii; death from compression of the lungs. Do. vol. v, 1825, p. 66, by Baron Campbell, *Ed. Med. and Surg. Journ.* 1821, an infant six weeks old—part of the stomach, small intestines, part of the colon, spleen, pancreas and great omentum, were contained in the left thoracic cavity; the heart and left lung were on *the right side* of the chest. In the *Recueil Period.* vol. ii, p. 32, is the case of a dead fœtus having a large, round herniary sac on the *lower part of the epigastric region*, fourteen inches in circumference, much contracted at the umbilicus, floating from side to side, containing the omentum, liver, spleen, pancreas, and all the intestines; the kidneys occupied the place of the liver and stomach. Was this a *ventral* hernia? Not having access to the work, I am not able to say. The following case of congenital *eventration* is from a quarto thesis little known, entitled *Pathologie Chirurgicale*, by M. Jules Cloquet, Paris, 1831, p. 128. "A feeble female child, born the day before, emitted a few plaintive cries. On the right side of the umbilicus existed a rounded perforation, with reddish ulcerous edges, through which a great part of the small intestines had escaped. The loop thus formed was at least a foot and a half in extent, the convolutions united in a mass by membranous adhesions, some old and some recent, evidently resulting from inflammation. The portion of mesentery which sustained this great loop adhered firmly to the circumference of the ulceration, and thus opposed any further issue of the intestinal mass. The protruded intestine was cold, greenish, full of meconium, and offered no peristaltic movements. Some parts were much dilated, others much contracted, the walls unnaturally thick and firm. The belly was depressed, and, as it were, retracted. In this child the intestines had already quitted the abdomen at the period of birth, and had no doubt inflamed because of their strangulation by the opening, and perhaps also by the unwonted contact of the liquor amnii."

Peritonitis. "This disease," says M. Billard, "is more common among new born children than has been generally supposed. I have seen in the bodies of two dead children, one aged 18, the other 24 hours old, ancient and very solid adhesions between the intestinal circumvolutions, and in one, the anterior convex surface of the liver adhered to the anterior wall of the abdomen. These adhesions could only be the results of peritonitis which had become developed within the uterus, and had gone through its stages before birth. I found also peritonitis in three children who died a short time after birth, who were all fresh and vigorous. In one, the sero-purulent effusion was every where abundant and the intestinal convolutions were very red externally, and had already begun to contract adhesions. M. Billard refers to the work of M. Dugès, *Rech. sur les Mal, &c., des Nouveau Nés,* Par. 1821, for a very interesting chapter devoted to this subject, in which will be found the interesting case examined by M. Chaussier, in which all the viscera were agglutinated by yellow, concrete albumen; false membranes lay upon the liver, &c., and the intestines were yellow, hard and thick.

One of the most important contributions ever made to the subject of fœtal pathology, is the paper in the *Edinburgh Med. and Surg. Journ.* October, 1838, entitled, "Notices of cases of Peritonitis in the fœtus in utero, part 1, by James Y. Simpson, M.D." In this most elaborate essay, which occupies twenty pages of the periodical, Dr. S. has reassembled all preceding cases, and has contributed *nine* from his own observation. All these children were born dead, and the autopsic examinations were recorded with extreme accuracy. To this article, every future writer upon congenital peritonitis must of necessity refer, and as the journal which contains it is easy of access, and much yet remains for me to do within the narrow limits to which I am restricted, I shall present a very brief analysis of the morbid appearances, and of some other matters it contains, and refer to the original paper for more minute particulars. Dr. S. found in the bodies of these patients, serous, or puriform effusions, an investiture of coagulable lymph, either in the form of flocculi, or membranous shreds, adhesions between the viscera, some slight, and others very firm, and lastly, complications of disease in the other organs contained in the belly, which will be mentioned under each respective head. The most common cause of this disease, Dr. S. conceives to be syphilis. No symptoms unequivocally denote its existence in utero. Its duration may be but for a few days, or much longer, and it may probably occur at any period after the fourth month. It is, of all the diseases to which the fœtus is liable, the most frequently fatal; if not in utero, soon after birth. The case recorded by Desormeaux, art. Œuf Humain, *Dict. de Med.* vol. 15, in which a child, born emaciated, yellow, swelled, the belly hard, tumid and tender, and the intestinal convolutions to be traced under the integuments, all announcing an intense and chronic enteritis, recovered and became healthy, is unique in the history of this disease. In addition to his own cases, Doctor S. notices that mentioned by Morgagni, *De Sed.* Ep. 67, § 17, wherein the mesentery and intestines in a fœtus, were agglomerated into a small mass under the liver, and covered by a false membrane. A case by M. Véron, read at the *Royal Acad. de Med.* in 1825, in his *Obs. sur les mal. des enf.* which contains others showing the existence of inflammatory and other diseases during intra-uterine life. The peritoneum was intensely red, a deposit of coagulable lymph, about a line in thickness, on it, all the abdominal organs and intestines glued together, in one mass, and purulent effusion in the abdomen. It lived fifteen hours. M. Brachet's case in the *Journ. Gén. de Méd.* vol. cii, 1828, adhesions of the liver to the walls of the abdomen, filamentous shreds of lymph, &c. A case by Cruveilhier, liv. 15, p. 2, yellowish serum in great quantity, (ascites,) and pseudo-membranous flocculi in the peritoneal cavity. Andral, *An. Path.* vol. ii, p. 737, intestines agglutinated by very firm cellular adhesions. A very interesting case by Mr. Scott, reported fully by Simpson, case 11. Ascites, puriform fluid and obvious marks of inflammation, and lastly, the case detailed by Mr. King, in *Guy's Hosp. Rep.* No. 5, "on opening the cavity of the belly in a fœtus of four months, it contained a good deal of fluid, and numerous soft flakes of matter floating in it; the intestines were in a bunch at the upper part of the abdomen. The urinary bladder much distended, and capable of holding half a pint, its coats decidedly thickened. A little behind its summit, a perforation was found, around which the vesicular tunics were attenuated; a simple fissure, less than half an inch long, and its margins thin. In this case, effusion of urine into the belly, seems to have caused peritonitis and death. The urethra was imperforate." Legouais and Dugès have met with peritonitis apparently caused by internal strangulation of the intestines.

"I have found," says Billard, "tubercular granulations in the peritoneum of a child who died four days after birth. M. Nonat communicated to the *Soc. Méd. d'Em.* the existence of a second peritoneum, concentric with the first, enveloping the small intestines as far as the ileum, in a man aged sixty, presumed to be congenital.

Ascites.—It is evident that some of the preceding cases of peritonitis were also cases of this disease, which is well known to be a common cause of dystocia. The work of M. Dugès, *Mem. sur les obstacles apportés a l'accouchement par les difformités des fétus*, in the 1st vol. of *Mem. de l'Acad. R. de Med.* may be consulted on this subject. But that ascites will occur without being attended with peritonitis, or any other perceptible disease, will appear from the following case and dissection, very few of which, reported in detail, are, I suspect, on record. It is to be found in the old *Journ. de Méd. Chir. et Pharm.*, by A. Roux, vol. xvii, p. 180. "A woman of Charleville, falling on her belly while pregnant, became affected with strangury, and the bladder was punctured during labour. The fœtus was stillborn, and on opening its body, near a pint of water was found, as well in the belly, as in the *chest* and other parts. All the parts of the child, *internal* as well as external, were well constituted, and no where was there any disposition to mortification observable." Dr. Blundell says that Loder had found a gallon of water in the abdomen of an infant at birth.

The 4th observation in the 15th liv. of Cruveilhier's *An. Path.*, is headed "Anasarca, Ascites, Hydrothorax, and Purpura Hæmorrhagica in a fœtus of seven months, which died in twelve hours after birth." There were purple spots on the tongue and surface of the body, infiltration of the subcutaneous cellular tissue, serosity in the belly, the liver being reduced to half its natural size, some petechiæ on the mucous membrane of the intestines, and many in the muscles, pericranium and pharynx. Hydrothorax in the right pleural cavity; infiltration beneath the arachnoid; sanguineous serosity in the thoracic duct. In the 5th observation of the same work, the abdomen contained serum, and the liver was of a remarkably deep olive green, purpura, effusion into pleura and pericardium, the consequences of syphilis. In the 2d observation of the same work, in a child which died in three hours after birth, in conjunction with pneumonia, there was peritonitis and a voluminous abdomen, containing a great quantity of yellowish serum, in the pseudo-membranous flocculi in the peritoneum. The intestines and stomach were very much contracted. The latter contained a thick white mucus, analogous to the white of egg. The internal surfaces presented a very decided punctuated redness, here irregular, and there disposed in lines.

In the *Arch. Gén. de Méd.* vol. viii, page 383, M. Ollivier d'Angers has recorded a case of encysted dropsy, hitherto without a parallel. A child, stillborn, but well developed, was born with an abdomen of immense bulk, whose thin and smooth walls allowed the transparent fluid which distended them to be seen. A very little serum flowed out when the integuments were incised. The peritoneum was uninjected. The lower part of the belly was nearly filled with a transparent tumour, formerly the great epiploon, whose laminæ were separated by a collection of serous fluid contained in their folds, in the midst of which floated two albuminous flakes. The surface of the tumour was irregularly embossed by the effect of the vessels which creep upon the surface of this serous fold, and thus formed several irregular, less extensible frena. There was a slight opacity of the posterior layer of the epiploon; the rest of the membrane possessed its accustomed transparency. The foramen of Winslow gaped widely, and it is presumable that the water which the belly contained, escaped through it. The other organs were unaltered.

Liver.—The conditions of this organ which I shall detail, are its absence, its being double, softened, indurated, lacerated, and its containing pus, granular tubercles, tophi, a hard tumour, its smallness and discolourations.

The liver has been said never to be completely absent, except in cases of complete acephalia, but Dr. Kieselbach (*Amer. Journ. Med. Sci.* Nov. 1839) has placed on record a case of the kind, in a human embryo, in other respects well formed. It may be out of its natural situation, or transposed, or enter into a ventral or umbilical hernia, or it may present unimportant varieties of shape. Morgagni, Ep. 48, 55, relates the following case. "An infant was born with a tumour as big as a man's fist on the right side and a little above the navel, devoid of skin and ending in a kind of prominent border. It became gangrenous and sloughed away, and the child died on the thirty-fifth day. The liver was double; one liver occupied the usual situation, and though rather small, was divided into very long lobes. The other was large, but shapeless, and joined to the former by a thick membrane. It was annexed to the trunk of the vena portæ, but its vena proceeded below the other liver into the vena cava. It constituted the tumour; there was no appearance of a gall bladder." Billard has given no case of congenital hepatic disease. He briefly remarks that sanguineous congestion is common, and thence that the organ is sometimes of a very deep reddish black colour; that he had twice seen the liver softened and exhaling a decided odour of sulphuretted hydrogen in full grown children. He had also found small tubercular granulations. "In June, 1731," says Morgagni, (*De sed.* vol. ii, page 485, Cooke's ed. Am.) "a mature fœtus, whose movements had not been felt for two days, was born dead. The viscera were so extremely soft, that not only the liver became fluid on a mere touch, but on the coat of the kidneys being divided, the substance was effused under the appearance of red poultice. Baumes, in his *Traité de l'Ictère des Enf. de naisance*, 1806, mentions that a jaundiced mother produced a child with both skin and conjunctiva sensibly discoloured. Its right hypochondrium was very prominent and hard at birth, and it died in four or five weeks. The tissues of the abdominal parietes and of all the abdominal viscera, were stained yellow. The left lobe of the liver, which was very large, was morbidly adherent to the neighbouring parts, and softened. The right lobe was indurated, and its lower surface contained a small abscess. The ductus communis was obstructed by a yellowish viscid matter. Billard had seen two cases coincide with the Cirronosis of Lobstein, in which there was general icterus of the integuments, and had seen in an icteric child, the tissue of the heart and pericardium, of a very decided saffron yellow colour, and the testis and thymus yellow and ecchymosed. The internal surface of the bladder, the liver, the periosteum and bones, the muscles, fat and internal and exterior surface of the intestinal tube have been coloured yellow; which tinge has been communicated to the mesentery and abdominal peritoneum, with or without external icterus. In the case by M. Breschet, mentioned under the head of Peritonitis, the liver was very red and larger than natural; its tissue was friable and softened in its enlarged right lobe; on dividing it, an inodorous, gray, reddish fluid, resembling purulent sanies, flowed from the cut surface. In cases No. 5 and 22 in Dr. Simpson's paper, there were clots of blood in the peritoneal cavity, which had proceeded from a rupture, or laceration, upon the concave surface of the liver, which was much softened, and must have occurred several days before death. A case is reported in the *Gaz. Méd.* July, 1833, by Dr. Rahn Escher of Zurich, in which a child is said to have been born with a very hard tumour of the left lobe of the liver, and which disappeared at three years of age, from the effects of a diarrhœa. In obs. 5, Cruveilhier, liv. 15, the liver was small, dense, and of a remarkable olive-green, a very singular condition coinciding with dropsy. In the 30th case, detailed in Dr. Simpson's second communication in the *Ed. Med. and Surg. Journ.* 1839, the lower surface of the right lobe of the liver was studded with numerous small, semi-cretaceous tubercles, and a few were found in the left lobe, some of which were imbedded two or three lines deep in the substance of the organ. I am indebted to the same erudite author for the following case from Bonetus, *Sepulch. Anat.* vol. iii, page 104. "Injicere fœtus sex mensium abortion, ad lobum infimum detectus est *tumor* inequalis, asper, tophorum particulis tanquam cerasorum nucleis, absque pare, tamen, plenus visu tactu que durus."

Gall Bladder.—"Absence of the gall bladder, when its canals exist, is possible," says M. Billard. Of this truth, the cases in Soemmering's translation of Baillie's Morbid Anatomy, p. 140; that of Dr. Cholmeley, *Med. Trans.* vol. vi, art. 4; that by Meckel, *Man. d'Anat.* vol. iii; that of a man in the *Mem. de Med. Milit.*, vol. xx, p. 406; and lastly, that by Amussat, *Mem. de l'Acad. de Méd.* of total deficiency of the gall bladder in a man aged twenty-four, are proofs. Denis has mentioned it thrice, *Gaz. Méd.* 1831. Ollivier, in a note on atrophy of the biliary vesicle in man, *Arch. Gén. de Méd.* vol. v, 1824, has mentioned several instances. "But," continues M. Billard, in the passage above cited, "I do not know that children have been born with a complete absence of the biliary passages."—2d ed, p. 436. Yet Sir E. Home, *Ph. Trans.* part ii, 1813, has given an example of a child that fed heartily, digested well, and had regular stools, and was, nevertheless, without a gall-bladder, *even a duct of any kind,* leading from the liver to the duodenum. There are some other peculiarities of formation met with which I omit.

The pathological states are inflammation and sabulous concretions. "I once," says Billard, "found it evidently inflamed; its inner surface intensely red, and its outer walls much thickened." It is common, after having washed away the bile which covers it, to find on it a very fine punctuated redness. Wrisberg, Sandifort's *Thesaur. Disput.* vol. iii, p. 214. In the child of a mother who labored under biliary calculi, which died in seven weeks after birth, there were "concrementa calculosa, sabuli instar," in the gall bladder. The liver was large and indurated.

Spleen.—Lieutaud gives an instance of congenital absence of the spleen, and supernumerary spleens are occasionally met with. It is also found congested, ruptured, enlarged, inflamed, simply hypertrophied, and tuberculated. Congestion, according to Billard, is the commonest congenital lesion, and he had once known it ruptured. In the sixth and tenth cases related in Dr. Simpson's paper on peritonitis before referred to, the spleen was much enlarged, had on it patches of lymph, and was morbidly adherent. "Tubercular granulations of the liver and spleen," Billard says, are not very rare. Hichad saw them in five children. In a case mentioned by Petitmengin, *Gaz. Méd.*, January, 1833, the spleen was enormously hypertrophied, and its peritoneal surface morbidly adherent. In the 11th obs. of Cruveilhier's liv. 15, the spleen was four times larger than natural.

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